

Electronic Acknowledgement Receipt

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| EFS ID: | 1230718 |
| Application Number: | 10801208 |
| Confirmation Number: | 2034 |
| Title of Invention: | Methods of manufacturing semiconductor devices having a ruthenium layer via automatic layer deposition |
| First Named Inventor: | Kwang-hee Lee |
| Customer Number: | 20792 |
| Filer: | D. Randal Ayers/Michele McMahan |
| Filer Authorized By: | D. Randal Ayers |
| Attorney Docket Number: | 5649-1277 |
| Receipt Date: | 02-OCT-2006 |
| Filing Date: | 16-MAR-2004 |
| Time Stamp: | 15:38:03 |
| Application Type: | Utility |
| International Application Number: | |

Payment information:

| | |
|--|--------|
| Submitted with Payment | yes |
| Payment was successfully received in RAM | \$500 |
| RAM confirmation Number | 155 |
| Deposit Account | 500220 |

File Listing:

| Document Number | Document Description | File Name | File Size(Bytes) | Multi Part | Pages |
|-----------------|----------------------|-----------|------------------|------------|-------|
| | | | | | |

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|-------------------------------|--|----------------------------|------------|-----|---|
| 1 | | 5649_1277_NotifyAppeal.pdf | 288856 | yes | 7 |
| Multipart Description | | | | | |
| Doc Desc | | Start | End | | |
| Notice of Appeal Filed | | 1 | 1 | | |
| Pre-Brief Conference request | | 2 | 2 | | |
| Miscellaneous Incoming Letter | | 3 | 7 | | |

Warnings:**Information:**

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|---|-------------------------|--------------|------|----|---|
| 2 | Fee Worksheet (PTO-875) | fee-info.pdf | 8176 | no | 2 |
|---|-------------------------|--------------|------|----|---|

Warnings:**Information:**

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| Total Files Size (in bytes): | 297032 |
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.